

ORIGIN OF THE WORD 'BAROMETER.'

The following article, by Dr. H. C. Bolton, is reprinted from *Science*, Vol. XVII, p. 548:

The instrument familiar to us all as the barometer was first universally known by the name of its inventor as 'Torricelli's tube'; de Guericke, the inventor of the air pump, called his huge water-barometer 'Semper Vivum,' also 'Weather Mannikin,' with the Latin form 'Anemoscopium.'

Soon after the year 1665 the words 'baroscope' and 'barometer' came into general use in England, but the individual to whom the credit belongs for originating these terms has not been certainly known; the assertion made by a contributor to the *Edinburgh Review* for 1812 that 'baroscope' was first used by Prof. George Sinclair, of Scotland, in 1668, is an error, for both words occur in the *Philosophical Transactions* four years earlier. The passage is unsigned and reads thus:

"Modern Philosophers, to avoid Circumlocutions, call that Instrument, wherein a Cylinder of Quicksilver, of between 28 and 31 inches in Altitude, is kept suspended after the manner of the Torricellian Experiment, a Barometer or Baroscope, first made publick by that Noble Searcher of Nature, Mr. Boyle, and employed by him and others to detect all the minut variations in the Pressure and Weight of the Air."

The mention of the words in connection with the name of Robert Boyle has led me to make a close examination of his voluminous and prolix writings. In Boyle's first publication, 'New Experiments Physico-Mechanical touching the Spring and Weight of the Air,' dated 1660, the words baroscope and barometer do not occur; he uses the common term 'tube,' and often writes of the 'mercurial cylinder.' Nor are these words used by him in his 'Defense of the Doctrine touching the Spring and the Weight of the Air' * * * against the objections of Franciscus Linus,' a paper published in 1662.

Their use by the anonymous writer to the *Philosophical Transactions*

in 1665 has been shown, and the question arises, who was this person who modestly concealed his name? I believe it was Boyle himself. This eminent man, who was so devoid of personal ambition that he declined a peerage, had a habit of writing about himself and his scientific labors in the third person, and often spoke of himself by fanciful, fictitious names, such as 'Philaretus' (in his fragmentary autobiography) and 'Carneades' (in the 'Sceptical Chymist'). That he should send an unsigned communication to a journal was not surprising, particularly as he had occasion to mention himself.

Be this as it may, my claim that Boyle originated the word barometer does not rest on such slender conjectures as these. One year later than the communication in the *Philosophical Transactions*, Boyle wrote to this journal (dated April 2, 1666) and said, 'barometrical observations (as for brevity's sake I call them),' using the personal pronoun this time. Elsewhere in the same paper are found the terms barometer, baroscope and baroscopical observations.

In his 'Continuation of New Experiments Physico-Mechanical' * * * of which the preface is dated 1667, occurs the following phrase: 'But though about the barometer (as others have by their imitation allowed me to call the instrument mentioned),' (Boyle's Works, Birch's edition, Vol. III, p. 219, London, 1744.)

This sentence is virtually an admission by Boyle that he had coined the word, since others imitating him had allowed and encouraged him to use the term to designate the tube of Torricelli.

I conclude, therefore, that the word 'barometer' was introduced into our language by the English philosopher, the Hon. Robert Boyle, about the year 1665. Boyle, by the way, was a scholar and able to use Greek in forming an English word. Finally, I may add that examination of Murray's Skeats' and other standard English dictionaries throws no light on the origin of the word; they merely refer to the *Philosophical Transactions* and give its obvious etymology.

THE WEATHER OF THE MONTH.

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CHARACTERISTICS OF THE WEATHER FOR FEBRUARY.

The mean barometric pressure was high over the northwestern quarter of the United States, and low over northeastern New England.

The temperature was above the normal in mean daily values ranging from $+0.8^{\circ}$ to $+2.5^{\circ}$ in the Atlantic coast districts and the Lake region; elsewhere it was below the normal, and as a rule the mean daily departures were greater than in the districts where it was above the normal. In the middle Plateau region the mean daily departures amounted to -13.0° .

The precipitation was deficient in the upper Lake region, North Dakota, upper Mississippi Valley, the Plateau, and Pacific coast districts, the departures, however, being slight except in the northern Plateau and the middle and north Pacific districts, where they ranged from -1.3 to -3.7 inches; elsewhere the precipitation was in excess, the departures in the South Atlantic States, Florida Peninsula, Gulf States, Ohio Valley and Tennessee, and the southern slope region, ranging from $+1.4$ to $+5.7$ inches.

The relative humidity was below the normal in values of from 1 to 5 per cent in the Atlantic coast and east Gulf districts, the upper Lake region, North Dakota, the northern Plateau, and south Pacific districts; 7 per cent in the north Pacific and 8 per cent in the middle Pacific districts; elsewhere it was above normal, and markedly so in the following districts: Middle slope region, where the departure amounted to $+10$ per cent, $+11$ per cent in the northern slope region, and $+15$ per cent in the middle Plateau district.

The cloudiness was above the average in the South Atlantic and Gulf States, Florida Peninsula, upper Mississippi Valley, middle and southern slope, and southern Plateau regions. In the remaining geographical districts it was below the average, the most marked departures occurring in North Dakota and the middle and northern Plateau and Pacific districts.

The month was very stormy in New England. In North Carolina there was an unusual number of gales, that of the 16th being the heaviest of the winter.

PRESSURE.

The distribution of monthly mean pressure is shown graphically on Chart VI and the numerical values are given in Tables I and VI.

The crest of the highest barometric pressure overlay southwestern Idaho, with a mean reading of 30.31 inches at Boise. The lowest mean pressure was reported from northeastern Maine, with a reading of 29.86 inches at Eastport. Another area of relatively low pressure overlay the upper Rio Grande Valley, the mean at El Paso, Tex., being 29.95 inches.

The pressure was below the normal in New England, generally in the Middle Atlantic States and lower Lake region, and in the extreme southwestern part of California, with the greatest departures at Maine stations, the departure at Eastport amounting to -0.12 inch; elsewhere the pressure was above the normal.

Generally over the region west of the Missouri River the departures were quite decided, especially over Wyoming and northwestern Colorado, and thence northwestward over Idaho, Washington, northern and eastern Oregon, and the northern parts of Nevada and Utah. The pressure diminished from that of January, 1903, in southern Texas, New Mexico, southwestern Colorado, Arizona, and central and southern California, but in none of these districts did the departure amount to -0.10 inch except at San Diego, Cal., where it amounted to -0.12 ; elsewhere the pressure increased over that of January, with generally very decided departures in the lower Lake region, lower Ohio Valley, the southern part of the middle slope and middle Plateau regions, and thence westward and northwestward to the coasts of Oregon and Washington, the greatest increases, $+0.20$ inch to $+0.23$ inch, being reported from North Dakota, eastern Montana, and the northern part of South Dakota.

TEMPERATURE OF THE AIR.

The mean temperature was above the normal in the Atlantic States, except western Georgia, in the greater portion of the Lake region, in northwestern Minnesota, and portions of north-central and western Montana, but the departures were,